

CHAPTER 6

RESTORATION STRATEGIES IN THE CHEATHAM LAKE WATERSHED

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6.1. BACKGROUND.

The Watershed Water Quality Management Plan serves as a comprehensive inventory of resources and stressors in the watershed, a recommendation for control measures, and a guide for planning activities in the next five-year watershed cycle and beyond. Water quality improvement will be a result of implementing both regulatory and nonregulatory programs.

In addition to the NPDES program, some state and federal regulations, such as the TMDL and ARAP programs, address point and nonpoint issues. Construction and MS4 storm water rules (implemented under the NPDES program) have transitioned from Phase 1 to Phase 2. More information on storm water rules may be found at: <http://www.state.tn.us/environment/wpc/stormh2o/>.

This Chapter addresses point and nonpoint source approaches to water quality problems in the Cheatham Lake Watershed as well as specific NPDES permittee information.

6.2. COMMENTS FROM PUBLIC MEETINGS. Watershed meetings are open to the public, and most meetings were represented by citizens who live in the watershed, NPDES permittees, business people, farmers, and local river conservation interests. Locations for meetings were chosen after consulting with people who live and work in the watershed. Everyone with an interest in clean water is encouraged to be a part of the public meeting process. The times and locations of watershed meetings are posted at: <http://www.state.tn.us/environment/wpc/watershed/public.shtml>.

6.2.A. Year 1 Public Meeting. The first Cheatham Lake Watershed public meeting was held on November 14, 2000, at the Howard School (Nashville). The goals of the meeting were to: (1) present, and review the objectives of, the Watershed Approach, (2) introduce local, state, and federal agency and nongovernmental organization partners, (3) review water quality monitoring strategies, and (4) solicit input from the public.

Major Concerns/Comments

- Destruction of small streams
- Flash floods increase as development (impervious surface) increases
- Water withdrawal
- Increased bank erosion
- Flooding due to development in floodplain
- Lack of public education about the value of greenways
- Litter in creeks
- Sediment and construction runoff
- Sewer crossings
- Trend toward recreational use of waters is not accompanied by increased access
- Loss of wetlands and floodplains due to development
- Lack of incentives and enforcement as a tool to encourage local control of floodplains and construction sites
- Riverbank erosion on Cumberland River as a result of unnatural releases from the dam

6.2.B. Year 3 Public Meeting. The second Cheatham Lake Watershed public meeting was held on October 1, 2002, at West End Community Church Ministry Center in Nashville. The goals of the meeting were to: (1) provide an overview of the watershed approach, (2) review the monitoring strategy, (3) summarize the most recent water quality assessment, (4) discuss the TMDL schedule and citizens' role in commenting on draft TMDLs, and (5) discuss BMPs and other nonpoint source tools available through the Tennessee Department of Agriculture 319 Program and NRCS conservation assistance programs.

6.2.C. Year 5 Public Meeting. Not yet scheduled.

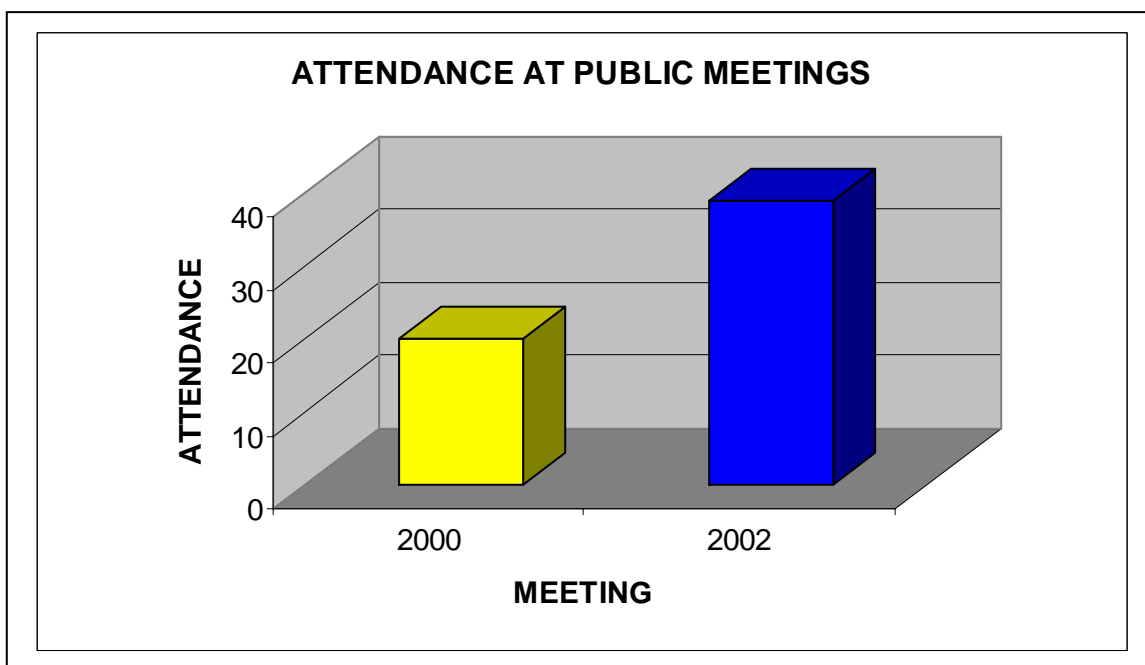


Figure 6-1. Attendance at the Cheatham Lake Watershed Joint Public Meetings. Attendance numbers do not include TDEC personnel.

6.3. APPROACHES USED.

6.3.A. Point Sources. Point source contributions to stream impairment are primarily addressed by NPDES and ARAP permit requirements and compliance with the terms of the permits. Notices of NPDES and ARAP draft permits available for public comment can be viewed at <http://www.state.tn.us/environment/wpc/wpcppo/>. Discharge monitoring data submitted by NPDES-permitted facilities may be viewed at http://www.epa.gov/enviro/html/pcs/pcs_query_java.html.

The purpose of the TMDL program is to identify remaining sources of pollution and allocate pollution control needs in places where water quality goals are still not being achieved. TMDL studies are tools that allow for a better understanding of load reductions necessary for impaired streams to return to compliance with water quality standards. More information about Tennessee's TMDL program may be found at: <http://www.state.tn.us/environment/wpc/tmdl/>.

Approved TMDL:

Cheatham Lake - Total Maximum Daily Load for E. Coli in Cheatham Lake in the Lower Cumberland Watershed in Davidson, Sumner and Williamson Counties. Approved 04/17/2008.

<http://state.tn.us/environment/wpc/tmdl/approvedtmdl/CheathamEcoli.pdf>

TMDLs are prioritized for development based on many factors.

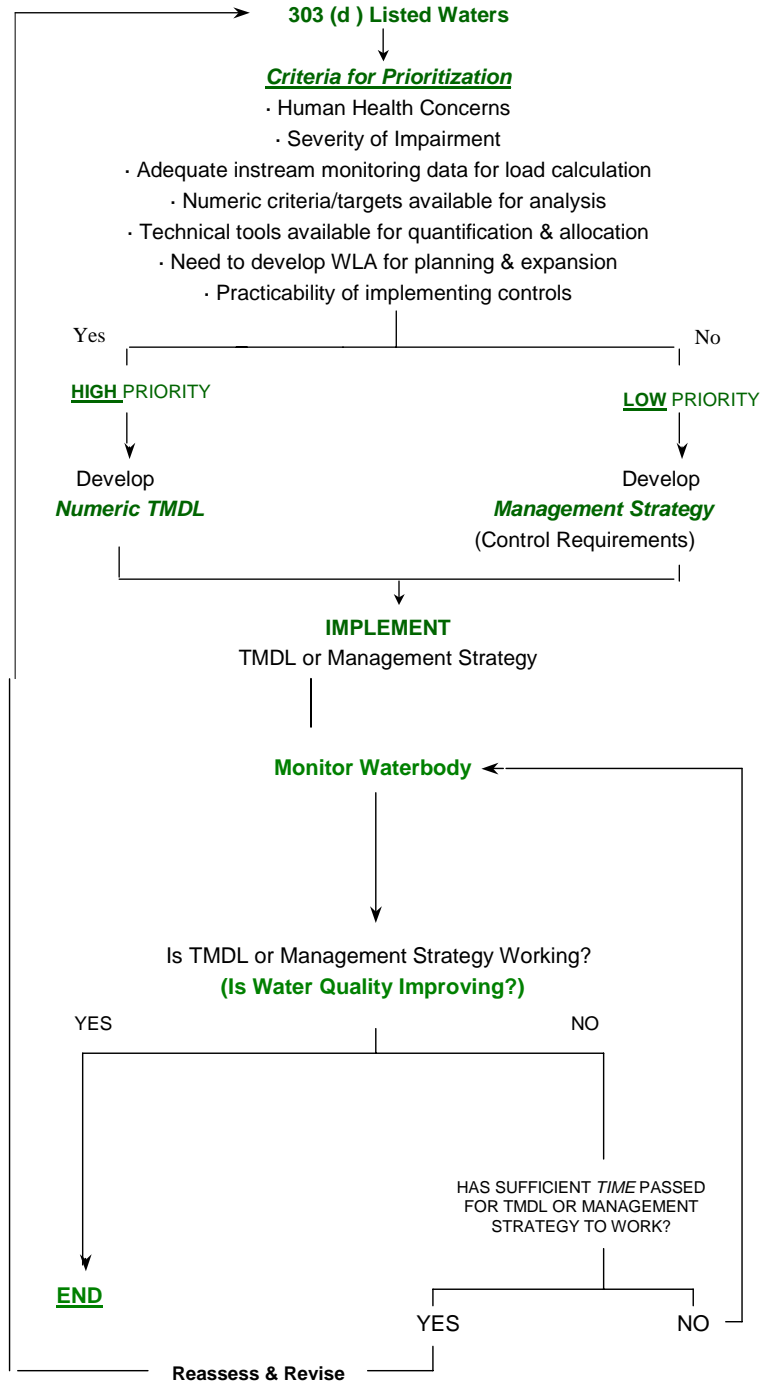


Figure 6-2. Prioritization Scheme for TMDL Development.

6.3.B. Nonpoint Sources

Common nonpoint sources of pollution in the Cheatham Watershed include urban storm water runoff, riparian vegetation removal and other habitat alterations, and inappropriate land development, road construction, and agricultural practices. Since nonpoint pollution exists essentially everywhere rain falls, existing point source regulations can have only a limited effect. Other measures are, therefore, necessary.

There are several state and federal regulations that address contaminants impacting waters in the Cheatham Watershed. Many of these are limited to point sources: pollution coming from a pipe or ditch. Often, controls of point sources are not sufficient to protect waters, so other measures are necessary. Some measures include efforts by landowners and volunteer groups, and the possible implementation of new regulations. Many agencies, such as the Tennessee Department of Agriculture (TDA) and the Natural Resources Conservation Service (NRCS), offer financial assistance to landowners for corrective actions (like Best Management Practices) that may be sufficient for recovery of impacted streams. Many nonpoint problems will require an active civic involvement at the local level geared towards establishment of improved zoning guidelines, building codes, streamside buffer zones and greenways, and general landowner education.

The following text describes types of impairments, possible causes, and suggested improvement measures. Restoration efforts should not be limited to only those streams and measures suggested below.

6.3.B.i. Sedimentation.

6.3.B.i.a. From Construction Sites. Construction activities have historically been considered “nonpoint sources.” In the late 1980’s, EPA designated them as being subject to NPDES regulation if more than 5 acres were being disturbed. In the spring of 2003, that threshold became 1 acre. The general permit issued for such construction sites establishes conditions for maintenance of the sites to minimize pollution from storm water runoff, including requirements for installation and inspection of erosion prevention and sediment controls. Also, the general permit imposes more stringent inspection, design criteria, sediment control measures, and self-monitoring requirements on sites in the watershed of streams that are already impaired due to sedimentation or are considered high quality. Regardless of the size, no construction site is allowed to cause a condition of pollution.

Beginning in 2003, the state began requiring some municipalities to obtain coverage under a permit designed to address nonpoint runoff issues: the General NPDES Municipal Separate Storm Sewer System Permit, commonly known as MS4 (see section 6.3.B.viii). Among other requirements, this permit directs the holder to develop a comprehensive storm water management program, including the adoption of local regulatory ordinances governing land disturbance near streams, and regular inspection of construction sites and other discharges into their storm sewers.

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Given the highly urbanized nature of the area, most of the Cheatham Watershed is covered by an active local MS4 program, including the large Metro Davidson County Phase 1 Storm water Program.

Due to the continuing rapid rise in population densities and construction activities in the greater Nashville area, land development is one of the most pervasive and serious sources of impact to area streams. Affected streams include Collins Creek, Turkey Creek, Owl Creek, Mill Creek, Holt Creek, Little Creek, Madison Creek, and Manskers Creek.

Construction sites within a sediment-impaired watershed may also have higher priority for inspections by WPC and MS4 personnel, and are likely to have enforcement actions for failure to control erosion.

6.3.B.i.b. From Channel and/or Bank Erosion. Many streams within the Cheatham Watershed suffer from varying degrees of stream bank erosion. When stream channels are altered, banks can become unstable and highly erodible. Heavy livestock traffic can also severely disturb banks. When large tracts of land are cleared of vegetation (especially trees) and replaced with impermeable surfaces like asphalt and rooftops, the large increases in the velocities and volumes of storm water runoff can also overwhelm channel and bank integrity because destabilized banks contribute to sediment loadings and to the loss of beneficial riparian vegetation.

Some improper agricultural practices, overzealous land development, and failure to properly manage storm water runoff have impacted the hydrology and morphology of many stream channels in the Cheatham watershed. Once destabilized, bank erosion and stream widening can progress rapidly, and is often difficult to repair.

Although uncommon in the urbanized regions of the watershed, unpermitted gravel dredging can also severely disturb stream banks. Destabilized banks contribute to sediment load and to the loss of beneficial riparian vegetation to the stream. The historical removal of cobble and rock from stream channels has resulted in destabilization of stream channels and aggressive erosion of stream banks.

Several agencies such as the NRCS, USCOE, and TDA, as well as citizen watershed groups, are working to stabilize portions of stream banks using bioengineering and other techniques. In addition, Metro Nashville and the Tennessee Stream Mitigation Program (TSMP) are also working on projects to restore stream bank integrity and riparian zones. Projects along Sevenmile Creek and Pavillion Branch have been successfully implemented. Many other affected streams would benefit from these types of projects.

Some methods or controls that might be necessary to address common problems are:

Voluntary Activities

- Re-establish bank vegetation, and stabilize banks through bioengineering techniques. (Just about every stream in the watershed could benefit, including Mill Creek, Sorghum Branch, Madison Creek, Manskers Creek).
- Establish off-channel watering areas for livestock by moving watering troughs and feeders back from stream banks, or at least limit cattle access to restricted

areas with armored banks entry (Upper Mill Creek and its tributaries, Cummins Branch).

Regulatory Strategies

- Increase efforts in the Master Logger program to recognize impaired streams and require more effective management practices within streamside management zones.)
- Require post-construction run-off rates to be no greater than pre-construction rates in order to avoid in-channel erosion. (Ewing Creek, Indian Creek, Mill Creek, Browns Creek)
- Limit road and utility crossings of streams through better site design. (Efforts at better site design are under way through volunteer efforts such as the Cumberland River Compact's "Building Outside the Box" program, and Metro MS4's "pre-con" site plan reviews)
- Restrict the use of off-highway vehicles on stream banks and in stream channels. (More rural areas such as Sycamore & Marrowbone Creek watersheds.)
- Limit clearing of stream and roadside ditch banks or other alterations (Watershed-wide issue, including smaller tributaries to Richland, Whites, and Manskers Creek). *Note: Permits may be required for any work along streams.*
- Encourage or require strong local buffer ordinances, especially dealing with post-construction, no-disturb easements
- Restrict rock harvesting to permitted sites.

Additional Strategies

- Better community planning and MS4 oversight for the impacts of development on small streams, especially development in growing areas such as Nolensville, Brentwood, Goodlettsville, the western edge of Davidson County, and the I-24 corridor through Cheatham and Robertson Counties.

6.3.B.i.c. From Agriculture and Silviculture. The Water Quality Control Act exempts normal agricultural and silvicultural practices that do not result in a point source discharge. Nevertheless, efforts are being made to address impacts due to these exempted practices.

The Master Logger Program has been in place for several years to train loggers how to install Best Management Practices that lessen the impact of logging activities on streams. Recently, laws and regulations established the authority for the Commissioners of the Departments of Environment and Conservation and of Agriculture to stop the logging operation that, upon failing to install these BMPs, is causing impacts to streams.

Since the Dust Bowl era, the agriculture community has strived to protect the soil from wind and water erosion. Agencies such as the Natural resources Conservation Service (NRCS), the University of Tennessee Agricultural Extension Service, and the Tennessee Department of Agriculture are striving to identify better ways of farming, to educate the farmers, and to install the methods that address the sources of some of the impacts due to agriculture. Cost sharing is available for many of these measures.

Many sediment problems traceable to agricultural practices also involve riparian loss due to close row cropping or pasture clearing for grazing. Lack of vegetated buffers along stream corridors due to agricultural land uses is a problem in some areas of the Cheatham Watershed. Many streams within the Sycamore, Marrowbone, and upper Whites Creek watersheds could benefit from the establishment of more extensive riparian buffer zones on farmland.

6.3.B.i.d. From Point Sources. Several permitted discharges within the Cheatham Watershed discharge suspended solids under the conditions of an NPDES permit and are reviewed during the watershed cycle for reissuance. Many of these facilities fall under Industrial Storm Water permit coverage. Common types of industries that may discharge solids include rock quarries, concrete plants, water treatment facilities, ore processing, and automotive washing operations.

6.3.B.ii. Pathogen Contamination.

Possible sources of pathogens are inadequate or failing septic tank systems, overflows or breaks in public sewer collection systems, poorly disinfected discharges from sewage treatment plants, and fecal matter from pets, livestock and wildlife washed into streams and storm drains. When fecal bacterial levels are shown to be consistently elevated to dangerously high levels, especially in streams with high potential for recreational uses, the division must post signage along the creek, warning the public to avoid contact. Once pathogen sources have been identified and corrected, and pathogen level reductions are documented, the posting is lifted.

Permits issued by the Division of Water Pollution Control regulate discharges from point sources and require adequate control for these sources. Individual homes are required to have subsurface, on-site treatment (i.e., septic tank and field lines) if public sewers are not available. The Division of Ground Water Protection within the Nashville Environmental Field Offices and delegated county health departments regulate septic tanks and field lines. In addition to discharges to surface waters, businesses may employ subsurface treatment for domestic wastewater or surface discharge of treated process wastewater. The Division of Water Pollution Control regulates surface water discharges and near-surface land application of treated wastewater.

Currently, many streams within the Cheatham Watershed are known to have excessive pathogen contamination. A partial list includes: Lumsley Fork, Walkers Creek, Slaters Creek, Manskers Creek, Richland Creek and most of its tributaries, Gibson Creek, Neelys Branch, Cooper Creek, Pages Branch, Dry Creek, Browns Creek, Whites Creek and many of its tributaries, Ewing Creek, Drakes Creek, Mill Creek Pavilion Branch, Shasta Branch, Sevenmile Creek, and a section of the Cumberland River itself. Most of these streams are impacted by urban areas, with contributions of bacterial contamination coming from storm water runoff, sewage collection system leaks, or treatment plant operation failures. The Cumberland River is still impacted by direct sewage discharges during Combined Sewer Overflow events, although this problem has been reduced considerably in the last decade. A smaller number of streams in the remaining agricultural watersheds also show elevated bacterial levels.

Some measures that may be necessary to control pathogens are:

Voluntary Activities

- Clean up pet waste. This has been found to be a surprisingly important source of fecal contamination in highly urbanized watersheds.
- Repair failed septic systems.
- Limit livestock access to streams and restrict stream crossings (upper Mill Creek & tributaries, upper Whites Creek & tributaries)

Regulatory Strategies

- Strengthen enforcement of regulations governing on-site wastewater treatment.
- Determine timely and appropriate enforcement for non-complying sewage treatment plants, large and small, and their collection systems.
- Require comprehensive pathogen source identification and elimination procedures to be implemented by municipal MS4 storm water programs
- Identify Concentrated Animal Feeding Operations not currently permitted.

Additional Strategies

- Develop intensive planning in areas where sewer is not available and treatment by subsurface disposal is not an option due to poor soils, floodplains, or high water tables.
- Develop and enforce leash laws and controls on pet fecal material.
- Greater efforts by sewer utilities to identify leaking lines or overflowing manholes
- Review the pathogen limits in discharge permits to determine the need for further restriction.

6.3.B.iii. Excessive Nutrients and/or Dissolved Oxygen Depletion.

These two impacts are usually listed together because high nutrients often contribute to low dissolved oxygen within a stream. Since nutrients often have the same source as pathogens, the measures previously listed can also address many of these problems. Elevated nutrient loadings are also often associated with urban runoff from impervious surfaces, from fertilized lawns and croplands, and faulty sewage disposal processes. Nutrients are often transported with sediment, so many of the measures designed to reduce sediment runoff will also aid in preventing organic enrichment of streams and lakes.

Dissolved oxygen depletion can also be due to the direct discharge of nutrients or other biodegradable materials by point sources. Limits in NPDES permits placed on parameters such as nitrates, ammonia, phosphorous, Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD), are designed to restrict the amounts of these pollutants to assimilative levels

Some sources of nutrients can be addressed by:

Voluntary Activities

- Educate homeowners and lawn care companies in the proper application of fertilizers.
- Encourage landowners, developers, and builders to leave stream buffer zones. Streamside vegetation can filter out many nutrients and other pollutants before they reach the stream. These riparian buffers are also vital along livestock pastures. Many streams in the Cheatham Watershed within agricultural areas would benefit from additional riparian buffers.
- Use grassed drainage ways that can remove fertilizer and sediment before it enters streams.
- Use native plants for landscaping since they don't require as much fertilizer and water.
- Develop better overall storm water management in urban and residential areas, including retrofitting existing commercial lots, homes, and roadways with storm water quality and quantity BMPs. This would especially improve the urban streams and lakes currently polluted by excessive nutrient and sediment inputs, such as (Indian Creek, Mill Creek, Sevenmile Creek, lower Whites Creek, Richland Creek and its various tributaries).

Physical changes to streams can prevent them from providing enough oxygen to biodegrade the materials that are naturally present. A few additional actions can address this problem:

- Maintain shade over a stream. Cooler water can hold more oxygen and retard the growth of algae. As a general rule, all stream channels will suffer from canopy removal. An intact riparian zone also acts as a buffer to filter out nutrient loads before they enter the water.
- Discourage impoundments and instead encourage filtration basins/ constructed wetlands. Ponds and lakes do not aerate water, and cause many water quality problems downstream. *Note: Permits may be required for any work on a stream, including impoundments.*

Regulatory Strategies

- Strengthen enforcement of regulations governing on-site wastewater treatment.
- Impose more stringent permit limits for nutrients discharged from sewage treatment plants
- Impose timely and appropriate enforcement for noncomplying sewage treatment plants, large and small, and their collection systems.
- Identify Concentrated Animal Feeding Operations (CAFO) not currently permitted, or any Animal Feeding Operations (AFO) that contribute to stream impacts and declare them as a CAFO requiring a permit.
- Support and train local MS4 programs within municipalities to deal with storm water pollution issues and require additional storm runoff quality control measures. (Sims Branch, Stoners Creek, Slaters Creek, and the Nolensville and Brentwood areas)
- Require nutrient management plans for all golf courses. (Owl Creek, Richland Creek, Madison Creek)

Additional Strategies

- Encourage TDA- and NRCS-sponsored educational programs targeted to agricultural landowners and aimed at better nutrient management, as well as information on technology-based application tools.

6.3.B.iv. Toxins and Other Materials.

Although some toxic substances are discharged in small quantities directly into waters of the state from a point source, much of these materials are washed in during rainfalls from an upland location, or via improper waste disposal that contaminates groundwater. In the Cheatham Watershed, a relatively small number of streams are damaged by toxins in storm water runoff from industrial facilities or urban areas. More stringent inspection and regulation of permitted industrial facilities, and local storm water quality initiatives and regulations, could help reduce the amount of contaminated runoff reaching state waters. Examples of streams that would benefit from these measures are East Fork Browns Creek and Sims Branch.

Individuals may also cause contaminants to enter streams by activities that may be attributed to apathy or the lack of knowledge or civility. Litter in roadside ditches, garbage bags tossed over bridge railings, paint brushes washed off over storm drains, and oil drained into ditches are all blatant examples of pollution in streams. Misapplication of chemicals, on agricultural and suburban areas, is another source of toxins.

Some of these problems can be addressed by:

Voluntary Activities

- Provide public education.
- Paint warnings on storm drains that connect to a stream.
- Sponsor community clean-up days.
- Landscape public areas.
- Encourage public surveillance of their streams and reporting of dumping activities to their local authorities.
- Encourage local municipalities to provide more convenient public disposal sites, especially for hazardous wastes.

Regulatory Strategies

- Continue to prohibit illicit discharges to storm drains and to search them out.
- Strengthen litter law enforcement at the local level.
- Increase the restrictions on storm water runoff from industrial facilities.

6.3.B.v. Habitat Alteration.

The alteration of the habitat within a stream can have severe consequences. Whether it is the removal of the vegetation, providing a root system network for holding soil particles together, the release of sediment, which increases the bed load and covers benthic life and fish eggs, the removal of gravel bars, "cleaning out" creeks with heavy

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equipment, or the impounding of the water in ponds and lakes, many alterations impair the use of the stream for designated uses. Habitat alteration also includes the draining or filling of wetlands.

Many streams within the Cheatham Watershed suffer from some degree of habitat alteration, especially riparian loss and bank disturbances from suburban and urban land development. As described in earlier sections, besides the direct loss of habitat, these types of disturbances also affect sediment and nutrient loadings, water temperatures, oxygen levels, storm water filtration, and nuisance algae growths.

Although large-scale public projects such as highway construction can alter significant portions of streams, individual landowners and developers are responsible for the vast majority of stream alterations. Some measures that can help address these problems are:

Voluntary Activities:

- Organize stream cleanups removing trash, limbs and debris before they cause blockage (Mill Creek, Manskers Creek, and Whites Creek all have benefited from volunteer clean-up days)
- Avoid use of heavy equipment to “clean out” streams ((North Fork Sycamore). *Instream work other than debris removal will require an Aquatic Resource Alteration Permit (ARAP).*
- Plant native vegetation along historically altered streams to stabilize banks and provide habitat (Whittemore branch, Sorghum Branch, Ewing Creek, Browns Creek, Dry Creek, Loves Branch, Gibson Creek, Richland Creek & tributaries [esp. Sugartree Creek & Vaughn’s Gap Branch])
- Encourage developers to use better site design and avoid extensive use of culverts or channel relocations in streams.

Regulatory Strategies:

- Restrict modification of streams by means such as culverting, lining, or impounding.
- Require mitigation for impacts to streams and wetlands when modifications are allowed.
- Require permitting of all rock harvesting operations.
- Increased enforcement may be needed when violations of current regulations occur, especially for illicit gravel dredging.

6.3.B.viii. Local Storm Water Management.

MS4 discharges are regulated through the Phase I or II NPDES-MS4 permits. These permits require the development and implementation of a Storm Water Management Program (SWMP) that will reduce the discharge of pollutants to the maximum extent practicable and not cause or contribute to violations of state water quality standards. The NPDES General Permit for Discharges from Phase I and II MSF facilities can be found at:

<http://www.state.tn.us/environment/wpc/stormh2o/>.

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The Cheatham Watershed is covered by a number of local MS4 programs, the largest being the Metro-Davidson County Phase I MS4 Program. They are involved in a number of innovative initiatives including a variety of educational programs and public service announcements, encouraging the development of local watershed groups, extensive monitoring of impaired waterways, aerial thermal reconnaissance for illicit discharges, and oversight of construction activities.

Smaller municipalities with active Phase II Storm water programs in the watershed include the Cities of Belle Meade, Berry Hill, Brentwood, Forest Hills, Goodlettsville, Lakewood, Nolensville, Oak Hill, and Sumner County.

For discharges into impaired waters, the MS4 General Permit requires that SWMPs include a section describing how discharges of pollutants of concern will be controlled to ensure that they do not cause or contribute to instream exceedances of water quality standards. Specific measurements and BMPs to control pollutants of concern must also be identified. In addition, MS4s must implement the proposed waste load allocation provisions of an applicable TMDL (i.e., siltation/habitat alteration, pathogens) and describe methods to evaluate whether storm water controls are adequate to meet the waste load allocation. In order to evaluate SWMP effectiveness and demonstrate compliance with specified waste load allocations, MS4s are encouraged to develop and implement appropriate monitoring programs by the designated date.

Some storm sewer discharges are not regulated through the NPDES MS4 program. Strategies to address runoff in these urban areas include adapting Tennessee Growth Readiness Program (TGRP) educational materials to the watershed. TGRP is a statewide program built on existing best management practices from the Nonpoint Education for Municipal Officials program and the Center for Watershed Protection. TGRP developed the program to provide communities and counties with tools to design economically viable and watershed friendly developments. The program assists community leaders in reviewing current land use practices, determining impacts of imperviousness on watershed functions, and allowing them to understand the economics of good watershed management and site design.

6.4. PERMIT REISSUANCE PLANNING

Under the *Tennessee Water Quality Control Act*, municipal, industrial and other dischargers of wastewater must obtain a permit from the Division. Approximately 1,700 permits have been issued in Tennessee under the federally delegated National Pollutant Discharge Elimination System (NPDES). These permits establish pollution control and monitoring requirements based on protection of designated uses through implementation of water quality standards and other applicable state and federal rules.

The following three sections provide specific information on municipal, industrial, and water treatment plant active permit holders in the Cheatham Lake Watershed. Compliance information was obtained from EPA's Permit Compliance System (PCS). All data was queried for a five-year period between January 1, 2001 and December 31, 2006. PCS can be accessed publicly through EPA's Envirofacts website. This website provides access to several EPA databases to provide the public with information about environmental activities that may affect air, water, and land anywhere in the United States:

http://www.epa.gov/enviro/html/ef_overview.html

Stream Segment information, including designated uses and impairments, are described in detail in Chapter 3, *Water Quality Assessment of the Cheatham Lake Watershed*.

6.4.A. Municipal Permits**TN0020737 Ashland City STP**

Discharger rating: Minor
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 10/30/10
Receiving Stream(s): Cumberland River Mile 158.2
HUC-12: 051302020107
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Oxidation ditch activated sludge with chlorination

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD % removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
BOD5	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
BOD5	All Year	267	lb/day	WAvg Load	3/Week	Composite	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
BOD5	All Year	200	lb/day	MAvg Load	3/Week	Composite	Effluent
BOD5	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurrences/ Month	MAvg Load	Continuous	Visual	Wet Weather
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	3/Week	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Measured	Influent (Raw Sewage)
Flow	Winter		MGD	DMax Load	Continuous	Continuous	Effluent
Overflow Use Occurrences	All Year		Occurrences/ Month	MAvg Load	Continuous	Visual	Non Wet Weather
Overflow Use Occurrences	All Year		Occurrences/ Month	MAvg Load	Continuous	Visual	Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Composite	Effluent

Table 6-1a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	200	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	267	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-1b.**Table 6-1a-b. Permit Limits for Ashland City STP.****Compliance History:**

The following numbers of exceedences were noted in PCS:

- 28 Settleable Solids
- 36 Total Suspended Solids (TSS)
- 27 Suspended Solids % Removal
- 11 Biological Oxygen Demand (BOD)
- 6 Escherichia coli
- 13 Overflows
- 48 Bypasses

Enforcement:

3/13/06 Performance Audit resulted in a Notice of Violation

Comments:

None

TN0057061 Cheatham County Industrial Park STP

Discharger rating: Minor
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 11/30/10
Receiving Stream(s): Cumberland River at mile 162.5
HUC-12: 051302020107
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Activated sludge

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	2/Month	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-2. Permit Limits for Cheatham County Industrial Park STP.

Enforcement:

NOV for expired permit on 8/30/05

Comments:

None

TN0074764 Tennessee Wastewater Systems, Inc. - River Road STP-Lost Hollow Subdivision

Discharger rating: Minor
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 3/1/06
Expiration Date: 9/30/10
Receiving Stream(s): Cumberland River at mile 163.9
HUC-12: 051302020107
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Lagoon

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year						Effluent
BOD5	All Year	40	mg/L	MAvg Conc	Weekly	Grab	Effluent
BOD5	All Year	50	mg/L	WAvg Conc	Weekly	Grab	Effluent
BOD5	All Year	60	mg/L	DMax Conc	Weekly	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Weekly	Grab	Effluent
E. coli	All Year	487	#/100mL	MAvg Ari Mean	Weekly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year						Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year						Effluent
TSS	All Year	100	mg/L	MAvg Conc	Weekly	Grab	Effluent
TSS	All Year	120	mg/L	DMax Conc	Weekly	Grab	Effluent
TSS	All Year	110	mg/L	WAvg Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent

Table 6-3. Permit Limits for Lost Hollow Subdivision.

Comments:

7/16/04 Comprehensive Evaluation Inspection: In Compliance

TN0020648 Nashville Dry Creek STP

Discharger rating: Major
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 9/30/10
Receiving Stream(s): Cumberland River at mile 213.9
HUC-12: 051302020101
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: WAS to dissolved air flotation to thickener to press to Central WWTP to landfill

Segment	TN05130202001_5000
Name	Cheatham Reservoir
Size	740
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Industrial Water Supply (Supporting), Domestic Water Supply (Supporting), Fish and Aquatic Life (Supporting)
Causes	N/A
Sources	N/A

Table 6-4. Stream Segment Information for Nashville Dry Creek STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	20	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	3002	lb/day	WAvg Load	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	15	mg/L	WAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	10	mg/L	MAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	2002	lb/day	MAvg Load	Daily	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	Daily	Calculated	%t Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
CBOD5	All Year	40	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	Daily	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	All Year	5004	lb/day	MAvg Load	Daily	Composite	Effluent
CBOD5	All Year	35	mg/L	WAvg Conc	Daily	Composite	Effluent
CBOD5	All Year	7006	lb/day	WAvg Load	Daily	Composite	Effluent
CBOD5	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
D.O.	All Year	5	mg/L	DMin Conc	Daily	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	Daily	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Daily	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
IC25 7day Ceriodaphnia Dubia	All Year	1.4	Percent	DMin Conc	Semi-annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	1.4	Percent	DMin Conc	Semi-annually	Composite	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Daily	Composite	Effluent
TRC	All Year	1.04	mg/L	DMax Conc	Daily	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Daily	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
TSS	All Year	8006	lb/day	WAvg Load	Daily	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	Daily	Composite	Effluent
TSS	All Year	6005	lb/day	MAvg Load	Daily	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Daily	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	MAvg Conc	Daily	Composite	Effluent

Table 6-5a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
TSS % Removal	All Year	40	Percent	DMin % Removal	Daily	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Daily	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Daily	Grab	Effluent

Table 6-5b.**Table 6-5a-b. Permit Limits for Nashville Dry Creek STP.*****Compliance History:***

The following numbers of exceedences were noted in PCS:

- 3 Fecal coliform
- 2 Suspended Solids % Removal
- 2 Carbonaceous Oxygen Demand (COD)
- 1 Escherichia coli
- 1 Ammonia
- 191 Overflows
- 12 Bypasses

Comments:

4/6/06 Compliance Evaluation Inspection: Major construction project has been underway for 8 months, consisting of 4 components: (1). Auxiliary wet weather pump station; (2). Conversion of aeration basins from coarse to fine bubble diffusion system to increase capacity; (3). Rehab Filter Bldgs and adding two primary digesters; (4). New odor control system. Project scheduled to be completed by November 2007.

DRAFT

TN0020575 Nashville Central STP

Discharger rating: Major
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 5/1/06
Expiration Date: 9/28/10
Receiving Stream(s): Cheatham Reservoir at Cumberland River mile 189.2
HUC-12: 051302020103
Effluent Summary: Treated municipal wastewater and treated combined wastewater (storm water plus municipal) from Outfall 001, partially treated combined wastewater from Outfall 001A only after treatment capacity is maximized, and combined sewer overflow from Outfalls 018, 019, 023, 024, 033, 035, 047, 020, 034, and 044.
Treatment system: WAS to press to holding to landfill

Segment	TN05130202001_3000
Name	Cheatham Reservoir
Size	994
Unit	Acres
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Non-Supporting), Irrigation (Supporting)
Causes	217
Sources	Combined Sewer Overflows, Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-6. Stream Segment Information for Nashville Central STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	20	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	36696	lb/day	DMax Load	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	15	mg/L	WAv Conc	Daily	Composite	Effluent
Ammonia as N (Total)	All Year	27522	lb/day	WAv Load	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	10	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	8340	lb/day	DMax Load	Daily	Composite	
Ammonia as N (Total)	Summer	7.5	mg/L	WAv Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	4170	lb/day	MAvg Load	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	5	mg/L	MAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	6225	lb/day	WAv Load	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	15	mg/L	WAv Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	20	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	16680	lb/day	DMax Load	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	12510	lb/day	WAv Load	Daily	Composite	
Ammonia as N (Total)	Winter	10	mg/L	MAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	8340	lb/day	MAvg Load	Daily	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/ Month	WAv Load	Continuous	Visual	Effluent
CBOD % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
CBOD5	All Year		mg/L	WAv Load	Daily	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Load	Daily	Composite	Effluent
CBOD5	All Year		mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	All Year	40	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	All Year		mg/L	DMax Load	Daily	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Conc	Daily	Composite	Effluent
CBOD5	All Year	64218	lb/day	WAv Load	Daily	Composite	Effluent
CBOD5	All Year	73392	lb/day	DMax Load	Daily	Composite	Effluent
CBOD5	All Year	35	mg/L	WAv Conc	Daily	Composite	Effluent
CBOD5	All Year		mg/L	WAv Conc	Daily	Composite	Effluent
CBOD5	Summer	15	mg/L	WAv Conc	Daily	Composite	Effluent
CBOD5	Summer	20850	lb/day	DMax Load	Daily	Composite	Effluent
CBOD5	Summer	12510	lb/day	WAv Load	Daily	Composite	Effluent
CBOD5	Summer	10	mg/L	MAvg Conc	Daily	Composite	Effluent
CBOD5	Summer	25	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	Summer	8340	lb/day	MAvg Load	Daily	Composite	Effluent
CBOD5	Winter	40	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	Winter	20	mg/L	MAvg Conc	Daily	Composite	Effluent
CBOD5	Winter	33360	lb/day	DMax Load	Daily	Composite	
CBOD5	Winter	30	mg/L	WAv Conc	Daily	Composite	Effluent
CBOD5	Winter	25020	lb/day	WAv Load	Daily	Composite	Effluent
CBOD5	Winter	16680	lb/day	MAvg Load	Daily	Composite	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Daily	Grab	Effluent

Table 6-7a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
D.O.	All Year		mg/L	DMin Conc	Daily	Grab	Effluent
Discharge Event Observation	All Year		Inches	MAvg Load	Continuous	Grab or Composite	Effluent
Duration of Discharge	All Year		Days/Month	MAvg Load	Continuous	Grab or Composite	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	Daily	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Daily	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Daily	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	Daily	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	5.3	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	5.3	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	5.3	Percent	DMin Conc	Quarterly	Composite	Effluent
Overflow Use Occurrences	All Year		Occurrences/Month	WAvg Load	Continuous	Visual	Effluent
Overflow Use Occurrences	All Year		Occurrences/Month	MAvg Load	Continuous	Visual	Effluent
Rainfall Duration	All Year		Hours	MAvg Load	Continuous	Grab or Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	Daily	Composite	Effluent
TRC	All Year	0.26	mg/L	DMax Conc	Daily	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Daily	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
TSS	All Year	45	mg/L	DMax Conc	Daily	Composite	Effluent
TSS	All Year	45	mg/L	DMax Conc	Daily	Composite	Effluent
TSS	All Year	37530	lb/day	DMax Load	Daily	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Daily	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	Daily	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Daily	Composite	Effluent
TSS	All Year		mg/L	WAvg Conc	Daily	Composite	Effluent
TSS	All Year		lb/day	DMax Load	Daily	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)

Table 6-7b.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
TSS	All Year		mg/L	DMax Conc	Daily	Composite	Effluent
TSS	All Year		mg/L	WAvg Load	Daily	Composite	Effluent
TSS	All Year	33360	lb/day	WAvg Load	Daily	Composite	
TSS	All Year	82566	lb/day	DMax Load	Daily	Composite	Effluent
TSS % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Daily	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Daily	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Daily	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Daily	Grab	Effluent

Table 6-7c.**Tables 6-7a-c. Permit Limits for Outfall 001 at Nashville Central STP.**

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Discharge Event Observation	All Year		Occurrences/Month	DMax Load	Daily	Calculated	Effluent
Flow	All Year		MGD	DMax Load	Daily	Calculated	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Calculated	Effluent
Rainfall	All Year		Inches	DMax Load	Daily	Calculated	Effluent
Rainfall Duration	All Year		Hours	DMax Load	Daily	Calculated	Effluent
Rainfall Events	All Year		Occurrences/Month	DMax Load	Daily	Calculated	Effluent

Table 6-8. Permit Limits for the remainder of the outfalls at Nashville Central STP.**Compliance History:**

The following numbers of exceedences were noted in PCS:

- 2 Total Suspended Solids (TSS)
- 2 Settleable Solids
- 2 Fecal coliform
- 1 Escherichia coli
- 1 Carbonaceous Biological Oxygen Demand (CBOD)
- 302 Overflows

Enforcement:

Remains under Order # 99-0390

Comments:

6/13/06 Pretreatment Inspection: All in good order. Currently 28 noncategorical + 41 categorical = 69 Significant Industrial Users (SIUs)

TN0024970 Nashville Whites Creek STP

Discharger rating: Major
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 9/28/10
Receiving Stream(s): Cumberland River at mile 182.6
HUC-12: 051302020105
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: WAS to dissolved air flotation to Central WWTP to bpress to landfill

Segment	TN05130202001_4000
Name	Cheatham Reservoir
Size	1000
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-9. Stream Segment Information for Nashville Whites Creek STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	Summer	10	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	2346	lb/day	WAvg Load	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	7.5	mg/L	WAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	5	mg/L	MAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Summer	1565	lb/day	MAvg Load	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	20	mg/L	DMax Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	15	mg/L	WAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	3128	lb/day	MAvg Load	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	10	mg/L	MAvg Conc	Daily	Composite	Effluent
Ammonia as N (Total)	Winter	4691	lb/day	WAvg Load	Daily	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences /Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	Daily	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
CBOD5	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	All Year		mg/L	MAvg Conc	Daily	Composite	Influent (Raw Sewage)
CBOD5	Summer	20	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	Summer	4691	lb/day	WAvg Load	Daily	Composite	Effluent
CBOD5	Summer	10	mg/L	MAvg Conc	Daily	Composite	Effluent
CBOD5	Summer	3128	lb/day	MAvg Load	Daily	Composite	Effluent
CBOD5	Summer	15	mg/L	WAvg Conc	Daily	Composite	Effluent
CBOD5	Winter	30	mg/L	DMax Conc	Daily	Composite	Effluent
CBOD5	Winter	7193	lb/day	WAvg Load	Daily	Composite	Effluent
CBOD5	Winter	4691	lb/day	MAvg Load	Daily	Composite	Effluent
CBOD5	Winter	23	mg/L	WAvg Conc	Daily	Composite	Effluent
CBOD5	Winter	15	mg/L	MAvg Conc	Daily	Composite	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Daily	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	Daily	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Daily	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Hg (T)	All Year	2E-04	mg/L	MAvg Conc	Semi-annually	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	2	Percent	DMin Conc	Continuous	Composite	Effluent
IC25 7day Fathead Minnows	All Year	2	Percent	DMin Conc	Continuous	Composite	Effluent
Overflow Use Occurences	All Year		Occurences /Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences /Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Daily	Composite	Effluent
TRC	All Year	0.9	mg/L	DMax Conc	Daily	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Daily	Composite	Effluent

Table 6-10a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
TSS	All Year		mg/L	DMax Conc	Daily	Composite	Influent (Raw Sewage)
TSS	All Year	12510	lb/day	WAvg Load	Daily	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	Daily	Composite	Effluent
TSS	All Year	9383	lb/day	MAvg Load	Daily	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Daily	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	MAvg Conc	Daily	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	Daily	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Daily	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Daily	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Daily	Grab	Effluent

Table 6-10b.**Tables 6-10a-b. Permit Limits for Nashville Whites Creek STP.****Compliance History:**

The following numbers of exceedences were noted in PCS:

TN0074748 Harpeth Valley Utility District STP

Discharger rating: Major
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 9/28/10
Receiving Stream(s): Cumberland River Mile 172.4
HUC-12: 051302020104
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: WAS to aerobic digester to terra-gator to land application

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: Ceriodaphnia Dubia	All Year	2.6	Percent	DMin Conc	Annually	Grab	Effluent
48hr LC50: Fathead Minnows	All Year	2.6	Percent	DMin Conc	Annually	Grab	Effluent
BOD % removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
BOD5	All Year	45	mg/L	DMax Conc	Weekdays	Composite	Effluent
BOD5	All Year		mg/L	DMax Conc	Weekdays	Composite	Influent (Raw Sewage)
BOD5	All Year	3336	lb/day	WAvg Load	Weekdays	Composite	Effluent
BOD5	All Year	40	mg/L	WAvg Conc	Weekdays	Composite	Effluent
BOD5	All Year	2502	lb/day	MAvg Load	Weekdays	Composite	Effluent
BOD5	All Year		mg/L	MAvg Conc	Weekdays	Composite	Influent (Raw Sewage)
BOD5	All Year	30	mg/L	MAvg Conc	Weekdays	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurrences/Month	MAvg Load	Continuous	Visual	Wet Weather
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	487	#/100mL	DMax Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Weekdays	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Overflow Use Occurrences	All Year		Occurrences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurrences	All Year		Occurrences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Weekdays	Composite	Effluent

Table 6-11a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
TSS	All Year	2502	lb/day	MAvg Load	Weekdays	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	Weekdays	Composite	Influent (Raw Sewage)
TSS	All Year	3336	lb/day	WAvg Load	Weekdays	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Weekdays	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Weekdays	Composite	Influent (Raw Sewage)
TSS	All Year	40	mg/L	WAvg Conc	Weekdays	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-11b.**Table 6-11a-b. Permit Limits for Harpeth Valley Utility District STP.****Compliance History:**

The following numbers of exceedences were noted in PCS:

- 4 Fecal coliform
- Total Chlorine
- Suspended Solids % Removal
- 76 Overflows

Comments:

6/26/06 Compliance Biomonitoring Inspection: In compliance

TN0067270 Cumberland Heights Rehabilitation Center

Discharger rating: Minor
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 6/1/06
Expiration Date: 9/30/10
Receiving Stream(s): Cumberland River at mile 166.2
HUC-12: 051302020104
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Aerated Lagoon

Segment	TN05130202001T_0999
Name	Cheatham Reservoir Misc Tribs
Size	99
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Not Assessed), Livestock Watering and Wildlife (Not Assessed), Recreation (Not Assessed), Irrigation (Not Assessed)
Causes	N/A
Sources	N/A

Table 6-12. Stream Segment Information for Cumberland Heights Rehabilitation Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	60	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	40	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
E. coli	All Year	487	#/100mL	MAvg Ari Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	100	mg/L	MAvg Conc	2/Month	Grab	Effluent
TSS	All Year	120	mg/L	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-13. Permit Limits for Cumberland Heights Rehabilitation Center.

Enforcement:

NOV on 2/21/06 for late permit application

Comments:

3/26/07 Compliance Evaluation Inspection: On March 26, 2007, Nashville EFO-WPC met with Cumberland Heights Rehabilitation Center to conduct a final inspection of the Cumberland Heights Sewer Modifications. The two STEP tanks with duplex pumps appeared to be constructed per the approved plans and specifications.

TN0058106 Hendersonville Shopping Center, Inc.

Discharger rating: Minor
City: Hendersonville
County: Davidson
EFO Name: Nashville
Issuance Date: 4/1/05
Expiration Date: 12/31/10
Receiving Stream(s): Unnamed tributary at mile 0.6 to the Cumberland River Mi. 215.9
HUC-12: 051302020101
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Biological Towers

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	Monthly	Grab	Effluent
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Monthly	Grab	Effluent
E. coli	All Year	487	#/100mL	MAvg Ari Mean	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-14. Permit Limits for Hendersonville Shopping Center, Inc.

Comments:

Last inspection – CEI March 9, 2007, NOV to be sent

- Biological tower w/recirculation, serves 27 businesses.
- Receiving stream is unnamed tributary running through US COE Rockland Recreation Area and Archery Range, permit limits modeled for Cumberland River (DO 1.0 mg/L, ammonia 5 mg/L mo. ave. / 10 mg/L da. max. BOD 25 mg/L mo. ave / 40 mg/L da. max.) Not protective of stream. Current system could not likely meet more stringent limits.
- April 1, 2007 change to 0.02 mg/L total chlorine residual limit, will require addition of de-chlorination equipment, not currently meeting chlorine limit.
- Aging system in poor condition, inadequate O & M, gas chlorination but not scales or chlorinator, just direct gas feed into treatment unit, media in biological tower collapsed last year, one recirculation line to tower is inoperable can use only one recirculation pump.
- MORs show only occasional permit violations, two recent WPC sampling events show extremely high e. coli violations, flow measurement on MORs is inaccurate.
- Not collecting effluent samples during periods of plant upset or mechanical failures.
- Replacement of system not likely due to very limited area available, most practical solution is to construct pump station and connect to local utility district collection system but there is currently no access and logistics of force main location are difficult. Nashville EFO plans meeting with owner and utility district to review options. Compliance schedule needed.

6.4.B. Industrial Permits**TN0002488 State Industries - Ashland City**

Discharger rating: Major
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 12/1/05
Expiration Date: 10/30/09
Receiving Stream(s): Ashland City STP outfall line to Cheatham Reservoir
 (Cumberland River at mile 158.2)
HUC-12: 051302020107
Effluent Summary: Treated process and non-process wastewater through
 Outfall 001
Treatment system: Neutralization, chemical precipitation, and pressure
 filtration

Segment	TN05130202001T_0100
Name	Unnamed Trib to Cheatham Reservoir
Size	2
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Sedimentation/Siltation, Other anthropogenic substrate alterations
Sources	Mine Tailings

Table 6-15. Stream Segment Information for State Industries - Ashland City.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year	29	lb/day	DMax Load	Quarterly	Composite	Effluent
Al (T)	All Year	11.87	lb/day	MAvg Load	Quarterly	Composite	Effluent
Cr (T)	All Year	2.68	lb/day	DMax Load	Quarterly	Composite	Effluent
Cr (T)	All Year	1.09	lb/day	MAvg Load	Quarterly	Composite	Effluent
Fe (T)	All Year	17.86	lb/day	DMax Load	2/Month	Composite	Effluent
Fe (T)	All Year	8.93	lb/day	MAvg Load	2/Month	Composite	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Continuous	Effluent
Ni (T)	All Year	9	lb/day	DMax Load	Monthly	Composite	Effluent
Ni (T)	All Year	6.38	lb/day	MAvg Load	Monthly	Composite	Effluent
Oil and Grease (Freon EM)	All Year	139	lb/day	DMax Load	2/Month	Grab	Effluent
Oil and Grease (Freon EM)	All Year	83.45	lb/day	MAvg Load	2/Month	Grab	Effluent
Pb (T)	All Year	0.95	lb/day	DMax Load	Monthly	Composite	Effluent
Pb (T)	All Year	0.83	lb/day	MAvg Load	Monthly	Composite	Effluent
TSS	All Year	285	lb/day	DMax Load	2/Month	Composite	Effluent
TSS	All Year	139	lb/day	MAvg Load	2/Month	Composite	Effluent
Zn (T)	All Year	8.49	lb/day	DMax Load	Monthly	Composite	Effluent
Zn (T)	All Year	3.58	lb/day	MAvg Load	Monthly	Composite	Effluent
pH	All Year	10	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	7.5	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-16a. Permit Limits for State Industries - Ashland City.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 1 Oil & Grease

Enforcement:

NOV June 15, 2005, Failure to provide representative sampling for total suspended solids and metals - sample container not cleaned between uses - sample not refrigerated during composting period. Failure to follow procedures for EPA approved laboratory methods of analyses for pH - incomplete calibration records - incomplete records on continuous recording meter.

Comments:

Manufacture electric and gas water heaters for the residential and commercial market.

TN0022632 Marathon Petroleum Company LLC - Nashville Terminal

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 5/1/05
Expiration Date: 3/31/10
Receiving Stream(s): Barkley Reservoir at Cumberland River mile 88.9
HUC-12: 051302020103
Effluent Summary: Storm water runoff, loadrack washdown and hydrostatic test water from Outfall 001
Treatment system: Alum, polymer, chlorine

Segment	TN05130202001_3000
Name	Cheatham Reservoir
Size	994
Unit	Acres
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Non-Supporting), Irrigation (Supporting)
Causes	217
Sources	Combined Sewer Overflows, Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-17. Stream Segment Information for Marathon Petroleum Company LLC.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Benzene	All Year	0.5	mg/L	DMax Conc	Monthly	Grab	Effluent
Ethylbenzene	All Year	0.2	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Monthly	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Monthly	Grab	Effluent
Pb (T)	All Year	0.1	mg/L	DMax Conc	Monthly	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Composite	Effluent
Toluene	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
Xylene	All Year	0.5	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-18. Permit Limits for Outfall 001 at Marathon Petroleum Company LLC.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Quarterly	Estimate	Effluent
Flow	All Year		MGD	MAvg Load	Quarterly	Estimate	Effluent
Oil and Grease (Freon EM)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Settleable Solids	All Year		mL/L	DMax Conc	Quarterly	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
pH	All Year		SU	DMax Conc	Quarterly	Grab	Effluent
pH	All Year		SU	DMin Conc	Quarterly	Grab	Effluent

Table 6-19. Permit Limits for Outfall SW1 at Marathon Petroleum Company LLC.

Comments:

Petroleum Bulk Stations and Terminals

6/20/05 Compliance Evaluation Inspection: In compliance

TN0022462 ExxonMobil Pipeline Company - Nashville Terminal

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 7/1/05
Expiration Date: 5/31/10
Receiving Stream(s): Cumberland River at mile 185.1
HUC-12: 051302020103
Effluent Summary: Storm water runoff, tank field; rack, pump and dock storm water runoff; rack and pump equipment washdown, monitoring well purge and hydrostatic test water
Treatment system: Oil/water separator for rack & washdown area with retention basin for storm water.

Segment	TN05130202001_3000
Name	Cheatham Reservoir
Size	994
Unit	Acres
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Non-Supporting), Irrigation (Supporting)
Causes	217
Sources	Combined Sewer Overflows, Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-20. Stream Segment Information for ExxonMobil Pipeline Company.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Benzene	All Year	0.5	mg/L	DMax Conc	Semi-annually	Grab	Effluent
Ethylbenzene	All Year	0.2	mg/L	DMax Conc	Semi-annually	Grab	Effluent
Flow	All Year		MGD	DMax Load	Quarterly	Totalizer	Effluent
Flow	All Year		MGD	MAvg Load	Quarterly	Totalizer	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Quarterly	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Semi-annually	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Semi-annually	Grab	Effluent
Toluene	All Year	1	mg/L	DMax Conc	Semi-annually	Grab	Effluent
Xylene	All Year	0.5	mg/L	DMax Conc	Semi-annually	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Quarterly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Quarterly	Grab	Effluent

Table 6-21. Permit Limits for Outfall 001 at ExxonMobil Pipeline Company.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Quarterly		Effluent

Table 6-22. Permit Limits for Outfall SW1 at ExxonMobil Pipeline Company.

Comments:

Petroleum Bulk Stations and Terminals

2/24/05 Compliance Evaluation Inspection: In compliance

TN0022420 Citgo Petroleum Corporation

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 9/01/05
Expiration Date: 7/28/10
Receiving Stream(s): Cumberland River at mile 191.4
HUC-12: 051302020103
Effluent Summary: Hydrostatic test water, tank bottoms water and storm water runoff through Outfall 001
Treatment system:

Segment	TN05130202001_4000
Name	Cheatham Reservoir
Size	1000
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-23. Stream Segment Information for CITGO Petroleum Corporation.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Benzene	All Year	0.5	mg/L	DMax Conc	Monthly	Grab	Effluent
Ethylbenzene	All Year	0.2	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekly	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekly	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Monthly	Grab	Effluent
Oil and Grease (Freon EM)	All Year	10	mg/L	MAvg Conc	Monthly	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year		mg/L	DMax Conc	1/Permit Cycle	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
Toluene	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
Xylene	All Year	0.5	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-24. Permit Limits for CITGO Petroleum Corporation.

Comments:

Bulk petroleum product storage and transfer to tanker trucks.

6/16/05 Compliance Evaluation Inspection: In compliance

TN0003573 Automotive Components Holdings, LLC

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/01
Expiration Date: 11/30/05
Receiving Stream(s): Discharges to Cumberland River at mile 181.5 for Outfall 001, mile 181.8 for Outfall 002, mile 176.4 via named tributary for Outfall 003, and at mile 181.2 for wastewater (leachate/storm water/river water clarifier water/solids land application)
HUC-12: 051302020104
Effluent Summary: Process wastewater/cooling water and storm water runoff through Outfall 001, non-contact cooling water and storm water runoff through Outfalls 002 and 003, landfill wastewater (leachate/storm water/river water clarifier water/solids land application) discharge via Outfall 004 only during Cumberland River inundation of sump/pump station
Treatment system: Alum, polymer, chlorine

Segment	TN05130202001_2000
Name	Cheatham Reservoir
Size	2449
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-25. Stream Segment Information for Outfalls 001, 002, and 004 for Automotive Components Holdings, LLC.

Segment	TN05130202001T_0999
Name	Cheatham Reservoir Misc Tribs
Size	99
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Not Assessed), Livestock Watering and Wildlife (Not Assessed), Recreation (Not Assessed), Irrigation (Not Assessed)
Causes	N/A
Sources	N/A

Table 6-26. Stream Segment Information for Outfall 003 from Automotive Components Holdings, LLC

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-27. Permit Limits for Outfall 002 at Automotive Components Holdings, LLC.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Phosphorus, Total	All Year	4.6	lb/day	DMax Load	Weekly	Composite	Effluent
Phosphorus, Total	All Year	4.6	lb/day	MAvg Load	Weekly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-28. Permit Limits for Outfall 003 at Automotive Components Holdings, LLC.

Comments:

Raw batch is melted to produce flat glass, which is formed into automotive parts in subsequent operations at the facility.

TN0001597 Vought Aircraft Industries, Inc.

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 4/1/06
Expiration Date: 10/30/10
Receiving Stream(s): Unnamed tributary at mile 1.5 to Mill Creek at mile 4.6 for Outfall 001 and SW1, and Finley Branch at mile 1.3 to Mill Creek at mile 7.2 for Outfall 002 and SW2

HUC-12: 051302020202
Effluent Summary: Non-contact cooling and condensate water, and storm water runoff from Outfalls 001, 002, SW1, and SW2

Treatment system: Dechlorination, and preaeration

Segment	TN05130202007_1000
Name	Mill Creek
Size	3.5
Unit	Miles
First Year on 303(d) List	1998
Designated Uses	Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Oxygen, Dissolved, Sedimentation/Siltation, Phosphate
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4), Sanitary Sewer Overflows (Collection System Failures)

Table 6-29. Stream Segment Information for Vought Aircraft Industries, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Cr (T)	All Year	0.016	mg/L	DMax Conc	Quarterly	Composite	Effluent
Cr (T)	All Year	0.011	mg/L	MAvg Conc	Quarterly	Composite	Effluent
Cu (T)	All Year	0.101	mg/L	DMax Conc	2/Month	Composite	Effluent
Cu (T)	All Year	0.063	mg/L	MAvg Conc	2/Month	Composite	Effluent
Fe (T)	All Year	5	mg/L	DMax Conc	Monthly	Composite	Effluent
Floating Solids Or Visible Foam-Visual	All Year		Visual	DMax Conc	Bi-monthly	Visual	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
Oil and Grease (Freon EM)	All Year	30	mg/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Weekly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	2/Month	Composite	Effluent
TSS	All Year	40	mg/L	DMax Conc	2/Month	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Composite	Effluent
Temperature (°C)	All Year		Deg. C	DMax Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Continuous	Recorder	Effluent
pH	All Year	6	SU	DMin Conc	Continuous	Recorder	Effluent

Table 6-30a. Permit Limits for Outfall 001at Vought Aircraft Industries, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Cr (T)	All Year	0.016	mg/L	DMax Conc	Quarterly	Composite	Effluent
Cr (T)	All Year	0.011	mg/L	MAvg Conc	Quarterly	Composite	Effluent
Cu (T)	All Year	0.101	mg/L	DMax Conc	2/Month	Composite	Effluent
Cu (T)	All Year	0.063	mg/L	MAvg Conc	2/Month	Composite	Effluent
Fe (T)	All Year	5	mg/L	DMax Conc	Monthly	Composite	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
Oil and Grease (Freon EM)	All Year	30	mg/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Weekly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	2/Month	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Composite	Effluent
Temperature (°C)	All Year		Deg. C	DMax Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Continuous	Recorder	Effluent
pH	All Year	6	SU	DMin Conc	Continuous	Recorder	Effluent

Table 6-31. Permit Limits for Outfall 002 at Vought Aircraft Industries, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
BOD5	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
Flow	All Year		MGD	DMax Load	Semi-annually	Estimate	Effluent
Oil and Grease (Freon EM)	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
pH	All Year		SU	DMax Conc	Semi-annually	Grab	Effluent

Table 6-32. Permit Limits for Outfall SW1 and SW2 at Vought Aircraft Industries, Inc.

Comments:

Aircraft parts and auxiliary equipment, guided missile and space vehicle parts.

11/16/06 Compliance Evaluation Inspection: In Compliance.

Notes:

1. At the time of the inspection both outfall 001 and 002 were clear. No problems where reported.
2. Records of calibration are maintained for the various monitoring instruments. However, the records for the continuous recording pH meter were incomplete.

TN0002259 E. I. DuPont De Nemours - Old Hickory

Discharger rating: Major
City: Old Hickory
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 9/30/10
Receiving Stream(s): Cumberland River (Old Hickory Reservoir) at mile 218.4 for Outfall 001
HUC-12: 051302020101
Effluent Summary: Treated process wastewater (via internal monitoring points 01A and 01B), treated groundwater, miscellaneous cooling and non-process wastewaters and storm water runoff from Outfall 001
Treatment system: Process wastewater treatment: equalization and sedimentation, activated sludge, chemical conditioning, floatation thickening, and aerobic digestion, sludge to POTW

Segment	TN05130202001T_0999
Name	Cheatham Reservoir Misc Tribs
Size	99
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Not Assessed), Livestock Watering and Wildlife (Not Assessed), Recreation (Not Assessed), Irrigation (Not Assessed)
Causes	N/A
Sources	N/A

Table 6-33. Stream Segment Information for E. I. DuPont De Nemours - Old Hickory.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Acrylonitrile	All Year	0.074	mg/L	MAvg Conc	Quarterly	Grab	Effluent
Acrylonitrile	All Year	0.149	mg/L	DMax Conc	Quarterly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Hexachlorobenzene	All Year	0.001	mg/L	MAvg Conc	Quarterly	Grab	Effluent
Hexachlorobenzene	All Year	0.002	mg/L	DMax Conc	Quarterly	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	4	Percent	DMin Conc	Annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	4	Percent	DMin Conc	Annually	Composite	Effluent
TOC	All Year		mg/L	DMax Conc	Weekly	Composite	Effluent
TOC	All Year		mg/L	MAvg Conc	Weekly	Composite	Effluent
TSS	All Year		lb/day	DMax Load	Weekly	Composite	Effluent
TSS	All Year		lb/day	MAvg Load	Weekly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-34. Permit Limits for Outfall 001 at E. I. DuPont De Nemours - Old Hickory.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	2116	lb/day	DMax Load	Weekly	Composite	Effluent
BOD5	All Year	1165	lb/day	MAvg Load	Weekly	Composite	Effluent
Flow	All Year		MGD	DMax Load	Weekly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Weekly	Instantaneous	Effluent
TSS	All Year	1902	lb/day	DMax Load	Weekly	Composite	Effluent
TSS	All Year	930	lb/day	MAvg Load	Weekly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-35. Permit Limits for Outfall 01B at E. I. DuPont De Nemours - Old Hickory.**Comments:**

Manufacture of polyester resin, spunbonded polypropylene fabrics, and spunlaced fabrics.

10/26/06 Compliance Evaluation Inspection: In compliance.

Notes:

1. Once in the last three years the pH limit has been reported below the permitted limit at the 001 outfall. The cause was identified and corrective action taken to prevent a recurrence.
2. Discharges, in excess of the permitted limit, from both internal discharge locations are infrequent but persistent. No discharge, in excess of the solids permitted limits, has been reported at the 001 outfall.
3. The ability of the site retention basin to accumulate solids from the permitted outfalls and other site runoff is diminishing with time. Staff requests that you submit your plan to operate the site retention basin and maintain permit compliance to the Nashville Central Office. This submittal will assist him in determining an appropriate regulatory response.

TN0003433 Innophos, Inc.

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 5/31/05
Expiration Date: 4/30/10
Receiving Stream(s): Cumberland River at mile 184.0
HUC-12: 051302020103
Effluent Summary: Treated industrial wastewater, treated purge water from groundwater monitoring wells, water from a groundwater interception ditch, boiler blowdown, and storm water runoff from Outfall 001
Treatment system: Neutralization

Segment	TN05130202001_4000
Name	Cheatham Reservoir
Size	1000
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-36. Stream Segment Information for Innophos, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Phosphorus, Total	All Year	405	lb/day	DMax Load	Weekly	Composite	Effluent
Phosphorus, Total	All Year	270	lb/day	MAvg Load	Weekly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Continuous	Recorder	Effluent
pH	All Year	6	SU	DMin Conc	Continuous	Recorder	Effluent
pH Range Excursions > 60 Minutes	All Year	0	Occurrences/Month	MAvg Load	Continuous	Not Applicable	Effluent
pH Range Excursions Monthly Total Accum	All Year	446	Minutes	DMax Load	Continuous	Not Applicable	Effluent

Table 6-37. Permit Limits for Innophos, Inc.**Comments:**

Industrial Inorganic Chemicals, NEC

TN0074781 Vietti Foods Company, Inc.

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 8/01/07
Expiration Date: 3/31/10
Receiving Stream(s): Discharges to Cumberland River at mile 181.5 for Outfall 001, mile 181.8 for Outfall 002, mile 176.4 via named tributary for Outfall 003, and at mile 181.2 for wastewater (leachate/storm water/river water clarifier water/solids land application)
HUC-12: 051302020103
Effluent Summary: Process wastewater/cooling water and storm water runoff through Outfall 001, non-contact cooling water and storm water runoff through Outfalls 002 and 003, landfill wastewater (leachate/storm water/river water clarifier water/solids land application) discharge via Outfall 004 only during Cumberland River inundation of sump/pump station
Treatment system: Alum, polymer, chlorine

Segment	TN05130202001_2000
Name	Cheatham Reservoir
Size	2449
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-38. Stream Segment Information for Outfalls 001, 002, and 004 for Automotive Components Holdings, LLC.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Phosphorus, Total	All Year	4.6	lb/day	DMax Load	Weekly	Composite	Effluent
Phosphorus, Total	All Year	4.6	lb/day	MAvg Load	Weekly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-39. Permit Limits for Outfall 003 at Automotive Components Holdings, LLC.

Comments:

5/06/06 Compliance Evaluation Inspection: In compliance

TN0064955 CSX Transportation, Inc.

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 5/1/05
Expiration Date: 3/31/10
Receiving Stream(s): East Fork of Browns Creek at mile 2.1
HUC-12: 051302020103
Effluent Summary: Storm water runoff and ground water inflow from Outfall 001
Treatment system: Alum, polymer, chlorine

Segment	TN05130202023_0100
Name	East Fork Browns Creek
Size	2.2
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Nitrates, Escherichia coli, Other anthropogenic substrate alterations, Oil and Grease
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4), Industrial Point Source Discharge, Municipal (Urbanized High Density Area)

Table 6-40. Stream Segment Information for CSX Transportation, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Alkalinity Total (as CaCO ₃)	All Year		mg/L	DMax Conc	Annually	Grab	Effluent
BOD ₅	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Chloride (as Cl)	All Year		mg/L	DMax Conc	Annually	Grab	Effluent
Dissolved Solids, Total (TDS)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Quarterly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Quarterly	Instantaneous	Effluent
Nitrite + Nitrate Total (as N)	All Year		mg/L	DMax Conc	Annually	Grab	Effluent
Oil and Grease (Freon EM)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Sulfate (T)	All Year		mg/L	DMax Conc	Annually	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
pH	All Year		SU	DMax Conc	Quarterly	Grab	Effluent

Table 6-41. Permit Limits for CSX Transportation, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Quarterly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Quarterly	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Quarterly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Quarterly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Quarterly	Grab	Effluent

Table 6-42. Permit Limits for Outfall 01A at CSX Transportation, Inc.**Comments:**

Railroads, Line-haul Operating

TN0064041 Metro Nashville Airport Authority

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 1/1/06
Expiration Date: 11/30/10
Receiving Stream(s): Sims Branch at mile 1.8 to Mill Creek at mile 1.6 to the Cumberland River at mile 194.5 (Outfalls 002 and SW2); Sims Branch at miles 1.9 and 2.0 (Outfalls 003 and 004), McCrory Creek at mile 3.5 to Stones River at mile 5.8 (Outfall SW1), unnamed tributary to Sims Branch (Outfalls SW3, SW4), Elissa Branch to Mill Creek (Outfalls SW5, SW6, SW7), Finley Branch to Mill Creek (Outfalls SW8, SW9), unnamed tributary to Mill Creek (Outfalls S10, S11)
HUC-12: 051302020202
Effluent Summary: Treated aircraft deicing fluid and storm water runoff from Outfall 002, overflow from South and North Ponds from Outfalls 003 and 004, and storm water runoff from outfalls SW1-S11
Treatment system: Oil/water separator, equalization, aerated lagoon biological treatment

Segment	TN05130202007_0150
Name	Sims Branch
Size	1.4
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Oxygen, Dissolved, Other anthropogenic substrate alterations
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4), Industrial/Commercial Site Storm water Discharge (Permitted)

Table 6-43. Stream Segment Information for Sims Branch on the Metro Nashville Airport Authority property.

Segment	TN05130202007_3000
Name	Mill Creek
Size	5.9
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Oxygen, Dissolved, Escherichia coli, Nutrient/Eutrophication Biological Indicators, Sedimentation/Siltation
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4), Sanitary Sewer Overflows (Collection System Failures)

Table 6-44. Stream Segment Information for Mill Creek on the Metro Nashville Airport Authority property.

Segment	TN05130202007_0200
Name	Elissa Branch
Size	1.9
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Not Assessed), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-45. Stream Segment Information for Elissa Branch on the Metro Nashville Airport Authority property.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
48hr LC50: Fathead Minnows	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
Ammonia as N (Total)	All Year	1	mg/L	MAvg Conc	Weekly	Grab	Effluent
Ammonia as N (Total)	All Year	2	mg/L	DMax Conc	Weekly	Grab	Effluent
CBOD5	Summer	3	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Summer	6	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Summer	4.5	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Summer	9	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Summer	18	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Summer		mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Summer		mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Summer	12	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Winter	25	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Winter	45	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Winter	37.5	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Winter	67.5	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Winter	97.5	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Winter		mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Winter	65	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Winter	65	mg/L	MAvg Conc	Monthly	Grab	Effluent
COD	All Year		mg/L	DMax Conc	Weekly	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Weekly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Weekly	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Monthly	Grab	Effluent
Oil and Grease (Freon EM)	All Year	10	mg/L	MAvg Conc	Monthly	Grab	Effluent
Stream Flow Estimated	All Year		MGD	DMax Load	Weekly	Grab	Instream Monitoring
TSS	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
Temperature (°C)	All Year		°C	DMax Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-46a. Permit Limits for Outfall 002 at Metro Nashville Airport Authority.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
CBOD5	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
COD	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Monthly	Estimate	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Estimate	Effluent
Oil and Grease (Freon EM)	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year		SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year		SU	DMin Conc	Monthly	Grab	Effluent

Table 6-47. Permit Limits for Outfall 004, SW1and SW2 at Metro Nashville Airport Authority.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 1 pH
- 1 Total Suspended Solids

Comments:

Airport facility serving the Middle Tennessee area

5/15/07 Compliance Evaluation Inspection: In compliance.

Notes:

1. The treatment facility was well maintained and operating properly. At the time of the inspection there was no flow from the lagoon.
2. During the inspection, Mr. Klahn turned on the sludge return pump. A break in the sludge return line on the west side of the lagoon was observed. Mr. Klahn immediately turned in a work order for the repair of this line.
3. The discharge monitoring reports (DMRs) for January 2006 through March 2007 were reviewed. There were no permit limit violations noted. Under the column labeled 'Frequency of Analysis', the data reported was the number of analyses run per month rather than the actual frequency at which the analyses were run. Also for some of the CBOD flow ranges, only a daily maximum was reported. If only one sample is collected in a given flow range during the month, then the results of that analysis will be both the monthly average and daily maximum.

TN0074161 Lone Star Industries, Inc. d/b/a Buzzi Unicem USA

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 7/1/01
Expiration Date: 4/30/05
Receiving Stream(s): Cumberland River at mile 189.2
HUC-12: 051302020103
Effluent Summary: Non-contact cooling water from Outfall 001
Treatment system: Alum, polymer, chlorine

Segment	TN05130202001_3000
Name	Cheatham Reservoir
Size	994
Unit	Acres
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Non-Supporting), Irrigation (Supporting)
Causes	217
Sources	Combined Sewer Overflows, Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-48. Stream Segment Information for Lone Star Industries, Inc. d/b/a Buzzi Unicem USA

No Permit Limits

Comments:

Receiving and unloading barges of Portland cement, storing cement, blending and selling cement in bags or truckloads.

11/9/07 Compliance Evaluation Inspection: In compliance.

Notes:

- The discharge is properly monitored and appropriate records are maintained.
- The outfall sign, required by the permit, was attached to the captive barge.

TN0065536 Pilot Travel Center #292

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 4/1/05
Expiration Date: 2/28/10
Receiving Stream(s): Pages Branch at mile 1.0 to Cumberland River at mile 188.5
HUC-12: 051302020103
Effluent Summary: Treated storm water runoff and treated diesel island wash water through Outfall 001
Treatment system: Alum, polymer, chlorine

Segment	TN05130202202_1000
Name	Pages Branch
Size	.6
Unit	Miles
First Year on 303(d) List	2002
Designated Uses	Fish and Aquatic Life (Not Assessed), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Escherichia coli
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4), Sanitary Sewer Overflows (Collection System Failures)

Table 6-49. Stream Segment Information for Pilot Travel Center #292.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Benzene	All Year	0.5	mg/L	DMax Conc	2/Month	Grab	Effluent
Flow	All Year		MGD		2/Month	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	2/Month	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	2/Month	Grab	Effluent
Oil and Grease (Freon EM)	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
Oil and Grease Visual	All Year		Occurrences/Month	DMax Load	2/Month	Visual	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
Zn (T)	All Year	0.199	mg/L	DMax Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Month	Grab	Effluent

Table 6-50. Permit Limits for Pilot Travel Center #292.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 15 Total Suspended Solids (TSS)
- 7 Zinc
- 7 Benzene
- 4 Oil & Grease
- 1 Settleable Solids

Comments:

Gasoline service station and convenience store

TN0068713 Gaylord Opryland Resort & Convention Center

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 2/1/06
Expiration Date: 12/31/10
Receiving Stream(s): Mile 198.07 of the Cumberland River (Outfalls 001), mile 197.54 (Outfall 002) and mile 198.147 of the Cumberland River (Outfall 003)
HUC-12: 051302020101
Effluent Summary: Filter backwash and non-contact cooling water through Outfall 001; recycled noncontact cooling water and storm water through Outfall 002 and noncontact cooling through Outfall 003
Treatment system: Alum, polymer, chlorine

Segment	TN05130202001_4000
Name	Cheatham Reservoir
Size	1000
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-51. Stream Segment Information for Gaylord Opryland Resort & Convention Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	MAvg Load	Monthly	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-52. Permit Limits for Outfall 001 at Gaylord Opryland Resort & Convention Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Monthly	Instantaneous	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-53. Permit Limits for Outfall 002 at Gaylord Opryland Resort & Convention Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Monthly	Instantaneous	Effluent
Temperature (°C)	All Year		°C	DMax Load	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-54. Permit Limits for Outfall 003 at Gaylord Opryland Resort & Convention Center.

Comments:

Gaylord Opryland Resort & Convention Center complex provides accommodations, restaurants, entertainment and shopping.

6/22/07 Compliance Evaluation Inspection: In compliance

TN0068136 Old Hickory Hydro Power Plant

Discharger rating: Minor
City: Hendersonville
County: Davidson
EFO Name: Nashville
Issuance Date: 10/1/05
Expiration Date: 8/31/10
Receiving Stream(s): Cumberland River at river mile 216.2
HUC-12: 051302020101
Effluent Summary: Noncontact cooling waters, station sump wastewater (which includes waters such as cooling water, river water that has leaked into plant at various points; river water from unwatering of penstock, scroll case, and draft tube; air compressor blowdown.
Treatment system: Alum, polymer, chlorine

Segment	TN05130201001_1000
Name	Old Hickory Reservoir
Size	27439
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Supporting), Industrial Water Supply (Supporting), Domestic Water Supply (Supporting), Irrigation (Supporting)
Causes	N/A
Sources	N/A

Table 6-55. Stream Segment Information for Old Hickory Hydro Power Plant.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	MAvg Load	Daily	Estimate	Effluent
Flow	All Year		MGD	DMax Load	Daily	Estimate	Effluent
PCB Total Scan Effluent	All Year	0.01	mg/L	DMax Conc	Annually	Grab	Effluent
PCB Total Scan Effluent	All Year	0.01	mg/L	DMin Conc	Annually	Estimate	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Load	Daily	Estimate	Effluent

Table 6-56. Permit Limits for Outfall 001 at Old Hickory Hydro Power Plant.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
PCB Total Scan Effluent	All Year	0.01	mg/L	DMax Conc	Annually	Grab	Effluent

Table 6-57. Permit Limits for Outfall 001 at Old Hickory Hydro Power Plant.**Comments:**

Generating electric power that is distributed to the TVA power system.
 3/18/07 Compliance Evaluation Inspection: In compliance

6.4.C. Water Treatment Permits**TN0078743 Ashland City Water Plant**

Discharger rating: Minor
City: Ashland City
County: Cheatham
EFO Name: Nashville
Issuance Date: 7/14/05
Expiration Date: 9/27/09
Receiving Stream(s): Marrowbone Creek at mile 0.8 to Cumberland River at mile 160
HUC-12: 051302020108
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Conventional treatment consisting of flocculation, sedimentation and filtration. Chemicals used include: ultron, caustic, fluoride, aquamag and sodium hypochlorite

Segment	TN05130202001_1000
Name	Cheatham Reservoir
Size	2264
Unit	Acres
First Year on 303(d) List	-
Designated Uses	Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting)
Causes	N/A
Sources	N/A

Table 6-58. Stream Segment Information for Ashland City Water Plant.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent

Table 6-59. Permit Limits for Ashland City Water Plant.**Comments:**

None

TN0004413 Madison Suburban U.D. WTP

Discharger rating: Minor
City: Madison
County: Davidson
EFO Name: Nashville
Issuance Date: 10/1/04
Expiration Date: 9/27/09
Receiving Stream(s): Cumberland River at river mile 200.3
HUC-12: 051302020101
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Alum polymer blend, caustic soda, copper sulfate, potassium permanganate, chlorine, fluoride, phosphate, PAC

Segment	TN05130202001_4000
Name	Cheatham Reservoir
Size	1000
Unit	Acres
First Year on 303(d) List	-
Uses	Fish and Aquatic Life (Supporting), Recreation (Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-60. Stream Segment Information for Madison Suburban U.D. WTP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-61. Permit Limits for Madison Suburban U.D. WTP.**Comments:**

Turbidity removal WTP

TN0074187 Harpeth Valley Utilities District WTP

Discharger rating: Minor
City: Nashville
County: Davidson
EFO Name: Nashville
Issuance Date: 10/8/04
Expiration Date: 9/27/09
Receiving Stream(s): Overall Creek to Cheatham Reservoir (Cumberland River mile 172.5)
HUC-12: 051302020104
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Sedimentation, filtration (finished water storage) using liquid alum with 510P coagulant aid, NaOH 25%, Cl₂, KMnO₄, hydrofluorosilicic acid, calcquest, activated carbon, sodium bisulfite

Segment	TN05130202001T_0999
Name	Cheatham Reservoir Misc Tribs
Size	99
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Not Assessed), Livestock Watering and Wildlife (Not Assessed), Recreation (Not Assessed), Irrigation (Not Assessed)
Causes	N/A
Sources	N/A

Table 6-62. Stream Segment Information for Harpeth Valley Utilities District WTP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-63. Permit Limits for Harpeth Valley Utilities District WTP.**Compliance History:**

The following numbers of exceedences were noted in PCS:

- 2 Settleable Solids
- 1 Aluminum

Comments:

Turbidity removal WTP